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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,312	06/26/2001	Siew Fei Lee	70005452-1	2336

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EXAMINER	
NGUYEN, KEVIN M	

ART UNIT	PAPER NUMBER
2674	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/892,312	LEE, SIEW FEI	
	Examiner	Art Unit	
	Kevin M. Nguyen	2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed on 07/02/2004 is entered. The rejections of claims 1-22 under 35 U.S.C. 112, 2nd paragraph are withdrawn. However, the indicated allowability of claims 1-22 are withdrawn in view of the newly discovered references to Thorne, III et al (US 5,670,955), Date et al (US 5,498,843), and Palisek (US 4,256,931). Rejections based on the newly cited references follow.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-5, and 7-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Thorne, III et al (US 5,670,955) [hereinafter Thorn] in view of Date et al (US 5,498,843) [hereinafter Date].

4. As to claim 1, Thorne teaches a jog dial comprising

[recited in lines 1-3 and 11-13 of claim 1]

Fig. 6 discloses a switch 4 of x-axis, and a switch 12 of x-axis corresponding to a first and a second x-axis input,

a switch 0 of y-axis, and a switch 8 of y-axis corresponding to a first and a second y-axis input,

the user's directional input through the round pad 8. For example, assume that the switch 0 in FIG. 6 represents the most counter-clockwise switch and switch 4 the

most clockwise switch in an arc of closed switches 0 through 4 corresponding to a first and a second directional input (col. 6, lines 58-62).

Thorne teaches all of the claimed limitations of claim 1, except for "elastically deformable diaphragm...recited in lines 4-8 of claim 1."

Date teaches related jog dial comprising the bulges 5a through 5d of the resilient member 5 are arranged at positions above the corresponding electrical contacts 6a through 6d on the wiring board 6 (see fig. 19, col. 15, lines 60-62).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Thorne's carbon contacts 20-50 and switch 74 (fig. 4), including the bulges 5a through 5d of the resilient member 5 are arranged at positions above the corresponding electrical contacts 6a through 6d on the wiring board 6, in view of the teaching in Date's reference because this would provide tilting the shape of the contact member is elastically transformed as taught by Date (col. 3, lines 4-5).

As to claim 2, Thorne teaches at least one diagonal input at switch 2 (fig. 6).

As to claim 3, Thorne teaches Fig. 6 disclosing the diagonal switch 2 (fig. 6) having a corresponding diagonal input position defined between one of switch "0" y-axis and the second switch "4" x-axis input (see fig. 6).

As to claim 4, Thorne teaches the at least one diagonal switch "2" input (fig. 6). Date teaches related jog dial comprising the bulges 5a through 5d of the resilient member 5 are arranged at positions above the corresponding electrical contacts 6a through 6d on the wiring board 6 (see fig. 19, col. 15, lines 60-62). Therefore, the modified teaching of Thorne's reference in view of the modified teaching of Date's

reference provide the "substantial evidence" and established a prima facie case to produce and result the claimed limitations of claims 4.

As to claim 5, Date reviews the operator push the center of the pad 110 (see fig. 1, col. 2, lines 11-12).

As to claims 7, 19, Thorne teaches the user can find his bearings on the round pad 8 without the need for looking at the round pad. While the embodiment shows four directional reference members 10 (an engagement means), the pad 8 can have as few as one directional reference member since the user can guess the other directions without looking at the pad (col. 3, line 64 through col. 4, lines 2).

As to claim 8, Thorne teaches an annular member 70 secures the pad 8 to the board member 72 and provides biasing of the pad 8 away from the board 72 so that when no pressure is applied to the pad, every contact is facing its respective switch in an unactuated position (col. 4, lines 57-61).

As to claim 9, Thorne teaches the user's directional input through the round pad 8. For example, assume that the switch 0 in FIG. 6 represents the most counter-clockwise switch and switch 4 the most clockwise switch in an arc of closed switches 0 through 4 corresponding to a first and a second directional input (col. 6, lines 58-62).

As to claim 10, Thorne teaches the user's directional input through the round pad 8. For example, assume that the switch 0 in FIG. 6 represents the most counter-clockwise switch and switch 4 the most clockwise switch in an arc of closed switches 0 through 4 corresponding to a first and a second directional input (col. 6, lines 58-62) and corresponding to 45^0.

As to claim 11, Thorne teaches a base 72 (fig. 4), the round pad 8 is captivity held in a housing 4 and is retained within the housing by a retaining ring 6. There is, however, sufficient space between the retaining ring 6 and the round pad 8 for maneuvering the pad (col. 3, lines 56-59).

As to claim 12, Thorne teaches the bias means 70 (fig. 4) located between the jog pad 10 and an upper surface of the base 72 (see fig. 4).

As to claim 13, Thorne teaches fig. 2 disclosing the jog pad is marked at (10) to indicate the positioning of the input positions (also see figs. 1 and 4).

As to claim 14, Thorne teaches fig. 4 disclosing the jog pad has an upper surface which patterned to enhance grip (10) to the jog pad by the user's finger (see fig. 4).

As to claim 15, Thorne teaches fig. 4 disposing the pivot 52 (see fig. 4).

As to claims 16, 17, 18, Thorne teaches the user can find his bearings on the round pad 8 without the need for looking at the round pad. While the embodiment shows four directional reference members 10 (an engagement means), the pad 8 can have as few as one directional reference member since the user can guess the other directions without looking at the pad (col. 3, line 64 through col. 4, lines 2). In other words, Thorne teaches all the subject matter claimed with the exception of the particular shape of engaging member within a groove, hollow or aperture. However, absent a showing of criticality it would have been within the level of skill in the art and obvious to one having ordinary skill to engineering design the shape an element as desired as was judicially recognized in re Dailey, 149 USPQ 47 (CCPA 1976). Therefore, claims 1-18 are rejected for the reason as set forth above.

5. As to claim 20, Thorne teaches a jog dial comprising

[recited in lines 1-4 and 12-14 of claim 20]

Fig. 6 discloses a switch 4 of x-axis, and a switch 12 of x-axis corresponding to a first and a second x-axis input,

a switch 0 of y-axis, and a switch 8 of y-axis corresponding to a first and a second y-axis input,

the user's directional input through the round pad 8. For example, assume that the switch 0 in FIG. 6 represents the most counter-clockwise switch and switch 4 the most clockwise switch in an arc of closed switches 0 through 4 corresponding to a first and a second directional input (col. 6, lines 58-62).

Thorne teaches all of the claimed limitations of claim 20, except for "elastically deformable diaphragm...recited in lines 4-9 of claim 20."

Date teaches related jog dial comprising the bulges 5a through 5d of the resilient member 5 are arranged at positions above the corresponding electrical contacts 6a through 6d on the wiring board 6 (see fig. 19, col. 15, lines 60-62).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Thorne's carbon contacts 20-50 and switch 74 (fig. 4), including the bulges 5a through 5d of the resilient member 5 are arranged at positions above the corresponding electrical contacts 6a through 6d on the wiring board 6, in view of the teaching in Date's reference because this would provide tilting the shape of the contact member is elastically transformed as taught by Date (col. 3, lines 4-5).

As to claims 21 and 22, Thorne teaches a processing unit 100 (fig. 5, col. 4, line 62 through col. 5, line 50).

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thorne and Date as applied to claim 1 above, and further in view of Palisek (US 4,256,931).

As to claim 6, Thorne and Date teach all of the claimed limitations of claim 1, except for, the central input comprises an elastically deformable diaphragm...recited in lines 1-6 of claim 6.

Palisek teaches a jog dial comprising the center input switch 24 (fig. 2), the dome of contact switch 12 (fig. 2).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide Palisek's dome of contact switch 12 for Date's center key 110 (fig. 1), in view of the teaching of Palisek's reference because this would provide the centrally disposed force-applying area permits selective, independent actuation of each of the switches in rapid succession as taught by Palisek (col. 2, lines 30-32).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on MON-THU from 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reached on **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kevin M. Nguyen
Patent Examiner
Art Unit 2674

KN
December 10, 2004

XIAO WU
PRIMARY EXAMINER